

Page 23, Line 30, please change "Example 4" to -- Example 5 --.

Remarks

Claims 1-3 and 7-17 are presented for the Examiner's consideration. Claims 1-3 and 7-17 are drawn to a composite comprising three layers. No new claims have been added. Claims 4-6 have been canceled. Claim 1 has been amended to incorporate the subject matter of originally filed Claim 6. Claim 16 has been amended to comply with the Examiner's request to correct the misspelling of the word "fourth". Claims 7-11 and 16 which were originally dependent on now-canceled claims have been amended. Applicants additionally request the foregoing changes to the specification to correct errors of a typographical nature. By the foregoing amendments, Applicants' claims have been amended to more particularly point out and distinctly claim the invention. Support for the amendments may be found in the claims and drawings as filed, for example.

Pursuant to 37 C.F.R. § 1.111, reconsideration of the present application in view of the foregoing amendments and the following remarks is respectfully requested.

On September 05, 2001 during a phone conversation between Douglas Tulley and Examiner Befumo, Applicants provisionally elected with traverse to prosecute the invention of Group I, Claims 1-17. Applicants hereby affirm election of Group I claims and specifically reserve the right to file divisional application on the invention of non-elected Group II (Claims 18-23).

By way of numbered sections 7, 8, 9 and 10 of the Office Action mailed September 13, 2001, the Examiner objected to the drawings and requested correction. Corrected formal drawings of Figures 5, 6 and 7 are herein submitted for the Examiner's review, along with copies of the drawings which show the corrections as either red-ink insertions or red-ink bracketed deletions. In addition to the corrections requested by the Examiner, Applicants have further corrected Figure 6 by deleting reference sign "W", not mentioned in the description.

By way of numbered section 13 of the Office Action mailed September 13, 2001, the Examiner rejected originally filed Claims 1-9 and 16 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over EP 0754796 A1 to Lickfield et al. (hereinafter "Lickfield et al.") in view of U.S. Patent No. 5,770,531 to Sudduth et al. (hereinafter "Sudduth et al."). Claims 4-6 have been canceled and Claim 1 amended to include the subject matter of Claim 6. The Examiner's rejection under 35 U.S.C. §103(a) as obvious over Lickfield et al. in view of Sudduth et al. is respectfully traversed to the extent that it may apply to the present claims.

Lickfield et al. describes a spunbond-meltblown-spunbond ("SMS") nonwoven laminate wherein the meltblown layer is formed from a polymer having a high melt flow rate. The Examiner directed Applicants' attention to page 7 lines 32-33 which states that the fibers used in "any of the webs" may be bicomponent fibers, for the proposition that Lickfield et al. discloses use of a bicomponent fiber layer wherein the fibers have an average diameter less than 7 microns (for example, a bicomponent meltblown fiber layer). However, Applicants believe that despite use of the word "any", Lickfield et al. does not in fact disclose use of a bicomponent meltblown fiber layer. A more complete reading of the context of that statement on page 7 shows that what was meant in Lickfield et al. by "any of the webs" was that any of the outer facing layers could be bicomponent fibers. The example given to amplify the statement on page 7 regarding bicomponent fibers (the three sentences following at page 7 lines 33-38) describes bicomponent fibers only with regard to a carded web facing layer, and not a meltblown layer.

Furthermore, a fuller reading of the Lickfield et al. document as a whole appears to demonstrate that a bicomponent fiber meltblown layer was not contemplated at all. Please see for example the following which describe the meltblown web in all cases as being of a polymer described in terms of the singular (i.e., monocomponent rather than bicomponent): page 3 line 5 ("...the polymer selected..."); page 3 line 16 ("...selecting an appropriate melt flow rate polymer..."); page 4 line 22 ("The polymer selected..."); page 4 line 24 ("...preferred embodiment ...is a ...web of polypropylene meltblown..."); page 5 lines 25 ("In meltblowing, thermoplastic resin is fed into an extruder where it is melted..."); page 5 line 40 ("...selecting an appropriate MFR polymer, to promote formation of microfine..."); page 5 lines 55-56 ("...these process parameters can be increased ...for a particular polymer system."); page 6 lines 14-16 ("...all these factors ...the polymer system used (i.e., the type of polymer used ...) are taken into account when determining the process parameters for a particular polymer used to form the meltblown webs..."); page 6 line 17 ("For example, to form meltblown microfibers of a polypropylene polymer..."); page 6 line 29 ("Referring again to Figure 3, ...pellets of a polymer..."); and in claims 6, 7, 20 and 21 ("...said thermoplastic microfine fibers (18) are formed of a polymer having..."). Conversely, Applicants are unable to find a single instance in which Lickfield et al. describes any bicomponent meltblown fibers of any sort, whether sheath-core, eccentric sheath-core, or side-by-side. The only instance where Lickfield et al. mentions bicomponent fibers at all (other than at page 7 lines 32-38 previously described above) is at page 7 lines 6-7 and is also in reference to the facing layer webs, not the meltblown layer ("Alternatively, at least one of webs 14 and 16 can be a carded web formed of staple length textile fibers, ...including bicomponent staple length textile fibers.").

Sudduth et al. teaches nonwoven webs, including nonwoven SMS laminate webs, which have reduced cup crush values (i.e., they are softer) due to use of an internal softening agent combined with a mechanical softening step. The Examiner has stated that, with respect to the elements of air permeability and cup crush energy in Application claims 1-9, "it is reasonable to presume that said limitations would be met by the combination of Lickfield et al. and Sudduth et al." and states that this presumption is supported because the combination allegedly uses similar materials and similar production steps as the claimed invention. However, Applicants respectfully point out that neither the materials, nor the production steps, are similar as between the claimed invention and the combination of Lickfield et al. and Sudduth et al. As described in the two paragraphs above, the combination of Lickfield et al. and Sudduth et al. does not disclose use of a bicomponent meltblown fiber layer, and, as described immediately above, Sudduth et al. uses internal softening agents in the nonwoven webs which are not necessary to the claimed invention. In addition, Sudduth et al. utilizes the process step of mechanically softening the webs, therefore the production steps are not similar. Please see Application at page 16 lines 12-14, "Such cup crush values can be achieved without the need for additional mechanical and/or chemical softening processes." Therefore, since neither the materials nor the process steps are similar as between the instant invention and the combination, a presumption that the elements of cup crush energy and air permeability are similar is not valid.

Also by way of numbered section 13 of the Office Action mailed September 13, 2001, the Examiner rejected claim 16 over the combination of Lickfield et al. in view of Sudduth et al. stating that since Sudduth et al. discloses SMMS fabrics using meltblown polypropylene, it would be obvious to use the claimed combination of a fourth layer comprising monocomponent polypropylene meltblown fibers in conjunction with the multicomponent layer. However, as discussed above, Applicants believe neither Lickfield et al. nor Sudduth et al. disclose use of a multicomponent meltblown fiber layer and that therefore there can be no suggestion or motivation for including the fourth layer of Claim 16 comprising a nonwoven web of monocomponent polypropylene meltblown fibers in conjunction with the multicomponent meltblown fiber layer.

For the reasons stated above, Applicants respectfully submit that the rejection of Claims 1-9 and 16 (as presently constituted in Claims 1-3, 7-9 and 16) under 35 U.S.C. §103(a) as obvious over Lickfield et al. in view of Sudduth et al., is improper and should be withdrawn.

By way of numbered section 14 of the Office Action mailed September 13, 2001, the Examiner rejected Claims 1-5 and 9 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary

skill in the art at the time the invention was made and thus unpatentable over U.S. Patent No. 4,729,371 to Krueger et al. (hereinafter "Krueger et al.") in view of U.S. Patent No. 5,492,751 to Butt, Sr. et al. (hereinafter "Butt, Sr. et al."). Of Claims 1-5 and 9, Claims 1-3 and 9 remain, Claim 1 having been amended to include the subject matter of Claim 6 which was not subject to rejection under 35 U.S.C. § 103(a) as obvious over Krueger et al. in view of Butt, Sr. et al. Applicants believe this rejection does not apply to the present claims since as the Examiner noted Krueger et al. teaches bicomponent meltblown and, while not limited in this regard, Butt Sr. et al. teaches SMS materials, but the combination of Krueger et al. in view of Butt, Sr. et al. fails to teach, disclose or even suggest a nonwoven laminate comprising bicomponent spunbond fiber second and third layer webs and including a first layer of multicomponent fibers having an average fiber diameter less than about 7 micrometers. Therefore Applicants respectfully submit that this rejection of Claims 1-5 and 9 (present Claims 1-3 and 9) should be withdrawn.

By way of numbered section 15 of the Office Action mailed September 13, 2001, the Examiner rejected Claim 16 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Krueger et al. in view of Butt, Sr. et al. and further in view of Sudduth et al. Applicants believe this rejection does not apply to present Claim 16 since as the Examiner noted Krueger et al. teaches bicomponent meltblown, and, while not limited in this regard, Butt, Sr. et al. and Sudduth et al. teach SMS materials, with Sudduth et al. further teaching various numbers of meltblown layers, but the combination of Krueger et al. in view of Butt, Sr. et al. further in view of Sudduth et al. fails to teach, disclose or even suggest a nonwoven laminate comprising bicomponent spunbond fiber second and third layer webs and including a first layer of multicomponent meltblown fibers, and further comprising a fourth layer comprising monocomponent polypropylene meltblown fibers. Therefore Applicants respectfully submit that this rejection of present Claim 16 should be withdrawn.

By way of numbered section 16 of the Office Action mailed September 13, 2001, the Examiner rejected Claims 10 and 17 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Krueger et al. in view of Butt, Sr. et al. and Sudduth et al. and further in view of U.S. Patent No. 3,900,678 to Aishima et al. (hereinafter "Aishima et al."). Applicants believe this rejection does not apply to present Claims 10 and 17. As the Examiner has noted Krueger et al. teaches bicomponent meltblown, and while not limited in this regard, Butt Sr. et al. and Sudduth et al. teach SMS materials with Sudduth et al. further teaching various numbers of meltblown layers, with Aishima et al. also appearing to teach two-component conjugate fibers using crystalline and amorphous polypropylene. However, the

combination of Krueger et al. in view of Butt, Sr. et al. and Sudduth et al. further in view of Aishima et al. fails to teach, disclose or even suggest a nonwoven laminate comprising bicomponent spunbond fiber second and third layer webs and including a first layer of multicomponent meltblown fibers, the multicomponent meltblown fibers comprising a first polymeric component comprising a crystalline propylene polymer and a second polymeric component comprising an amorphous polyalphaolefin polymer. Applicants also note that Aishima et al. discloses large staple fibers and textile yarns but does not appear to be disclosing or suggesting multicomponent meltblown fibers at all (please see column 5 lines 57 - 60; see also column 6 lines 13-20 ("15 denier"), and Examples which disclose the fibers of Aishima et al. to be 15 to 30 denier or approximately 40 to 70 microns for propylene polymers). Therefore Applicants respectfully submit that this rejection of present Claims 16 and 17 should be withdrawn.

For the reasons stated above, it is respectfully submitted that all of the present claims are in form for allowance.

No additional independent or dependent claims have been added by way of this amendment and response, and therefore Applicants believe no additional fees are necessary. However, in the event any prosecutorial fees are due, please charge to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: (770) 587-8096.

Respectfully submitted,

CLARK ET AL.

By:



William D. Herrick

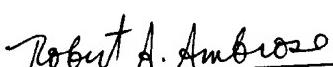
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CERTIFICATE OF MAILING

I, Robert A. Ambrose, hereby certify that on February 07, 2002 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By:



Robert A. Ambrose

Version With Marking To Show Changes Made

In the Claims

1. (Amended) A nonwoven laminate comprising:

a first layer having a first side and a second side, said first layer comprising a nonwoven web of multicomponent fibers having a first polymeric component and a second polymeric component in distinct zones across the cross-section of the fibers which extend substantially continuously along the length of the fibers, said multicomponent fibers having an average fiber diameter less than about 7 micrometers;

a second layer proximate the first side of said first layer, said second layer comprising a nonwoven web of continuous bicomponent spunbond fibers having an average fiber diameter greater than about 10 micrometers;

a third layer proximate the second side of said first layer, said third layer comprising a nonwoven web of continuous bicomponent spunbond fibers having an average fiber diameter greater than about 10 micrometers; and

wherein said layers are bonded together to form a multilayer laminate having a hydrohead of at least 50 mbars, a Frazier air permeability in excess of 70 cubic feet/minute/square foot and a cup crush energy less than 2150 g-mm.

4. (Please cancel Claim 4) [The nonwoven web laminate of claim 3 wherein said second layer comprises a nonwoven web of spunbond fibers.]

5. (Please cancel Claim 5) [The nonwoven web laminate of claim 4 wherein said second layer comprises a nonwoven web of spunbond fibers.]

6. (Please cancel Claim 6) [The nonwoven web laminate of claim 5 wherein said second and third layers comprise bicomponent spunbond fiber webs.]

7. (Amended) The nonwoven web laminate of claim [6] 1 wherein at least one component in each of said first, second and third layers comprises a propylene polymer and further wherein said multilayer laminate has a cup crush energy less than 2050 g-mm.

8. (Amended) The nonwoven web laminate of claim [6] 1 wherein at least one component in each of said first, second and third layers comprises an ethylene polymer and further wherein said multilayer laminate has a cup crush energy less than 2050 g-mm.

9. (Amended) The nonwoven web laminate of claim [6] 1 wherein said laminate has a Frazier air permeability in excess of 100 cubic feet/minute/square foot.

10. (Amended) The nonwoven web laminate of claim [5] 3 wherein the first polymeric component of said multicomponent meltblown fiber web comprises a propylene polymer having a crystallinity above 70 J/g and further wherein the second polymeric component of said meltblown fiber web comprises an amorphous polyalphaolefin having a crystallinity below about 65 J/g.

11. (Amended) The nonwoven web laminate of claim [5] 3 wherein said second and third spunbond layers are extensible and further wherein the first polymeric component of said multicomponent meltblown fiber web comprises an elastic polyolefin and wherein said second component of the multicomponent meltblown fiber web comprises an elastic polymer.

16. (Amended) The nonwoven web laminate of claim [5] 3 further comprising a fourth layer comprising a nonwoven web of monocomponent polypropylene meltblown fibers and further wherein said [forth] fourth layer is located between said second and third layers and adjacent said first layer.